

Appl. No. 10/815,468
Amdt. dated July 20, 2006
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 1641

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1 (currently amended): A microarray comprising a support having a plurality of
2 discrete regions having a biopolymer spotted thereon, wherein chemoselectively attached-to said
3 biopolymer in each of said regions is a ligand that can be the same or different from a ligand in
4 any other of said discrete regions, and wherein the concentration of said ligand in said discrete
5 regions ~~is substantially normalized~~ varies less than 50%.
- 1 2 (original): The microarray of claim 1, wherein said support is selected from the
2 group consisting of glass, polystyrene, PDVF membranes, nylon membranes, and polycarbonate
3 slides.
- 1 3 (original): The microarray of claim 1, wherein said biopolymer is a member
2 selected from the group consisting of oligosaccharides, proteins, polyketides, peptoids,
3 hydrogels, polylactates and polyurethanes.
- 1 4 (original): The microarray of claim 1, wherein said biopolymer is attached to
2 said support via noncovalent interactions.
- 1 5 (original): The microarray of claim 4, wherein said noncovalent interactions
2 are selected from the group consisting of hydrogen bonding, van der Waals interactions,
3 hydrophobic interactions, hydrophilic interactions and combinations thereof.
- 1 6 (original): The microarray of claim 1, wherein said biopolymer is attached to
2 said support via covalent interactions.

PATENT

Appl. No. 10/815,468
Amdt. dated July 20, 2006
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 1641

1 7 (original): The microarray of claim 1, wherein said ligand is selected from the
2 group consisting of amino acids, peptides, proteins, sugars, lipids, nucleic acids, small organic
3 compounds, pharmaceutical agents, candidate pharmaceutical agents, natural or synthetic
4 antigens, and combinations thereof.

1 8 (canceled): ~~The microarray of claim 1, wherein said ligand is attached to~~
2 ~~said biopolymer via chemoselective ligation.~~

1 9 (original): The microarray of claim 1, wherein said biopolymer is agarose, and
2 said support is glass.

1 10 (withdrawn): The microarray of claim 1, wherein said biopolymer is human
2 serum albumin, and said support is polystyrene.

1 11 (canceled): ~~The microarray of claim 1, wherein the concentration in said~~
2 ~~discrete regions varies less than 50%.~~

1 12 (previously presented): The microarray of claim 1, wherein the concentration
2 in said discrete regions varies less than 20%.

1 13 (previously presented): The microarray of claim 1, wherein the concentration
2 in said discrete regions varies less than 5%.

1 14 (withdrawn): A method of producing a concentration-normalized ligand
2 array, said method comprising:

3 (a) forming a ligand-modified biopolymer by attaching a ligand to a
4 functionalized biopolymer via chemoselective ligation; and

5 (b) spotting an aliquot of said modified biopolymer mixture onto each of a
6 plurality of discrete regions on a solid support to produce a concentration-normalized ligand
7 array.

PATENT

Appl. No. 10/815,468
Amdt. dated July 20, 2006
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 1641

1 15 (withdrawn): The method of claim 14, wherein said method further
2 comprises, prior to step (b), the following step:
3 (a)(i) combining said ligand-modified biopolymer with a biopolymer solution to
4 form a modified biopolymer mixture.

1 16 (withdrawn): The method of claim 14, wherein said solid support is selected
2 from the group consisting of glass, polystyrene, PDVF membranes, nylon membranes, and
3 polycarbonate slides.

1 17 (withdrawn): The method of claim 14, wherein said aliquot is spotted onto
2 said solid support under conditions sufficient to form a gel-coated surface.

1 18 (withdrawn): The method of claim 14, wherein said biopolymer is a member
2 selected from the group consisting of oligosaccharides, proteins, polyketides, peptoids,
3 hydrogels, polylactates and polyurethanes.

1 19 (withdrawn): The method of claim 14, wherein said ligand is selected from
2 the group consisting of amino acids, peptides, proteins, sugars, lipids, nucleic acids, small
3 organic compounds, pharmaceutical agents, candidate pharmaceutical agents and combinations
4 thereof.

1 20 (withdrawn): The method of claim 14, wherein said ligand-modified
2 biopolymer is peptide-modified agarose and said solid support is glass.

1 21 (withdrawn): The method of claim 14, wherein said ligand-modified
2 biopolymer is peptide-modified human serum albumin and said solid support is polystyrene.

1 22 (withdrawn): A method for promoting cell or tissue growth at a desired site,
2 said method comprising contacting said site with a ligand-modified biopolymer in an amount
3 effective to promote cellular chemotaxis and cell or tissue growth at said site, wherein said
4 biopolymer component is a member selected from the group consisting of agarose, polylysine

Appl. No. 10/815,468
Amdt. dated July 20, 2006
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 1641

PATENT

5 and polyacrylamide, wherein said ligand component is a chemotactic peptide specific for a cell
6 surface receptor, and wherein said ligand component is attached to said biopolymer component
7 via chemoselective ligation.

1 23 (withdrawn): The method of claim 22, wherein said biopolymer is agarose.

1 24 (withdrawn): The method of claim 22, wherein said site is a member selected
2 from the group consisting of a stent, a graft, an organ, a tissue and an implant.

1 25 (withdrawn): The method of claim 22, wherein said cell or tissue growth
2 occurs *in vivo*.

1 26 (withdrawn): The method of claim 22, wherein said cell or tissue growth
2 occurs *in vitro*.

1 27 (withdrawn): A method for assaying the binding of ligands to a binding
2 partner, said method comprising

3 (a) contacting a binding partner with a microarray of claim 1; and
4 (b) determining the amount of binding that occurs between said binding partner
5 and the ligands present in the discrete regions of said microarray.

1 28 (withdrawn): The method of claim 27, wherein said microarray comprises a
2 modified agarose biopolymer.

1 29 (currently amended): A microarray comprising a support having a plurality of
2 discrete regions having a preformed ligand-modified biopolymer spotted thereon, wherein the
3 ligand can be the same or different from a ligand in any other of said discrete regions, and
4 wherein the concentration of said ligand in said discrete regions varies less than 50% is
5 ~~substantially normalized~~.

1 30 (currently amended): A microarray comprising a support having a plurality of
2 discrete regions made by

Appl. No. 10/815,468
Amdt. dated July 20, 2006
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 1641

PATENT

- 3 (a) forming a ligand-modified biopolymer by attaching a ligand to a
4 functionalized biopolymer via chemoselective ligation; and
5 (b) spotting an aliquot of said modified biopolymer mixture onto each of a
6 plurality of discrete regions on a solid support wherein said ligand can be the same or different
7 from a ligand in any other of said discrete regions, and wherein the concentration of said ligand
8 in said discrete regions varies less than 50% ~~is substantially normalized~~.